9% of total cost of T2DM. The cost estimate was most sensitive to incidence and event cost of peripheral vascular disease, stroke and severe vision loss. **CONCLUSIONS:** Based on the present analysis, T2DM places a significant financial burden on the health care system in Mexico, with cost of treating related complications being the main cost driver. Given the model focuses on diagnosed and treated T2DM patients, it is likely this cost is even higher when undiagnosed and untreated patients are considered. Delaying the onset of complications could result in a reduction in costs, as well as benefits for the patient and health care system.

PDB7

DIRECT COSTS OF TYPE 2 DIABETES FROM THE BRAZILIAN PUBLIC HEALTH CARE SECTOR PERSPECTIVE

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OBJECTIVES: This study aimed to quantify the annual financial cost of type 2 diabetes (T2DM) in Brazil and explore the relative contribution of different components of cost. **METHODS:** A cost of illness model was developed in Microsoft Excel 2007 to estimate the financial cost of T2DM in Brazil from the public health care payer perspective. Cost of routine management and complications were included in the analysis. Data inputs for prevalence of T2DM (weighted to include only patients who are diagnosed and treated) and related complications, costs and routine management were sourced from the published literature and publicly available databases, where available. Key opinion leader input was sought to fill data gaps. Sensitivity analyses were conducted to identify parameters which were most likely to impact overall results when varied. Costs are presented in Brazilian Reals 2012. **RESULTS:** The annual cost of T2DM in Brazil is estimated to be 11,275,921,167 BRL ($5,471,123,022USD) which represents 5.3% of national health care expenditure. Costs of complications were estimated to account for 56% of the total cost of T2DM. Cardiovascular complications accounted for 32% of total T2DM cost. Diabetes drug costs were estimated to account for 31% of total T2DM health care spending. The overall cost estimate was most sensitive to the laser eye surgery, hemodialysis and cardiovascular complications and the frequency and cost of routine physician consultations. **CONCLUSIONS:** The findings indicate that there is a high economic burden of T2DM for the Brazilian health care system. Cost of treating related complications was the main driver. An even higher burden of the disease is expected if undiagnosed and patients currently not being treated start receiving public medical attention. The burden of the disease could considerably be reduced if T2DM related complications were avoided, which not only benefits the health care system but the patients as well.

PDB8

TRENDS IN HEALTH CARE RESOURCES UTILIZATION, COST AND MEDICATION SELECTION IN THE TREATMENT OF DIABETES

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OBJECTIVES: Diabetes is one of the most common chronic diseases in Canada. It affects about 6.8% of the Canadian population. Treating and managing the disease and its complications is associated with a significant economic burden. The objective of this study was to analyse trends in terms resource utilization, cost and treatment patterns in the management of diabetes. **METHODS:** Patients covered by the Quebec provincial drug reimbursement program (RAMQ) who had a diagnosis of diabetes, in 2005 and were covered continuously by the public drug program for the period from January 2006 to December 2010 were selected. Health care resources in terms of diabetes medications and physician visits, hospitalization, intensive care unit stay, hospital outpatient clinic visits, and emergency room visits associated with a diagnosis of diabetes were estimated over a 5-year period, from January 2006 to December 2010. Trends in the proportion of diabetes medications used each year over the 5-year study period were also estimated. **RESULTS:** A total of 46,194 diabetic patients were included in the study. The mean age of the study population was 65.4 years (SD=12.3) and proportion of male/female was 47% and 53% respectively. Over the study period, annual cost of diabetes medications varied from $320 (SD=464) in 2006 to $372 (SD=546) in 2010 (+16%) while total cost of treatment associated with diabetes varied from $627 (SD=1456) to $715 (SD=1632) (+14%) during that period. Metformine remains the most widely used medication throughout the study period with 64.3% of users in 2006 and 65.6% in 2010. Proportion of insulin users increased from 15.2% to 22.7% while gliclazide users increased from 4.4% to 11.2% during the study period. **CONCLUSIONS:** Over the five-year study period cost of diabetes treatment has increased at a rate similar to inflation, while trends of increased adoption of insulin and newer medications is observed.

PDB9

COST-EFFECTIVENESS OF PARICALCITOL VERSUS PARATHYROIDECTOMY FOR SECONDARY HYPERPARATHYROIDISM TO CHRONIC KIDNEY DISEASE IN MEXICO

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OBJECTIVES: Secondary hyperparathyroidism (SHPT) affects one of every two Mexicans with chronic kidney disease (CKD) at stage five. The objective of this research was to assess cost effectiveness (CE) of Paricalcitol intravenous administration (IV) versus parathyroidectomy (PTX) from Mexican payer perspective. **METHODS:** A decision tree model was designed to simulate patient resources usage and survival rate in 5 years time-frame treated with paricalcitol IV and parathyroidectomy based on clinical data in recent published literature. Time-frame begins when a patient is refractory to Calcitriol therapy and physician decides to treat with Paricalcitol or program PTX. Resources usage considered were just directly related to SHPT treatment: drug cost, surgery and hospitalization costs and medical supplies linked. Unit costs were collected from Mexican Government Databases: IMSS official database, Diagnosis Related Groups from IMSS, Official Journal of the Federation. (Cost considered 5% annual discount rate).Incremental Cost-Effectiveness Ratio (ICER) was calculated with treatment costs and Life-years gained (LYG) offset based on incremental survival rate of compared therapies. Probabilistic Multivariable sensibility analysis was completed with 5,000 simulated patients. **RESULTS:** Survival rate and confidence interval obtained from model was 0.63 (0.60, 0.66) for paricalcitol and 0.46 (0.44, 0.48) for PTX. Average survival of both therapies resulted in an incremental 0.61 LYG for paricalcitol patients (+18%). Average five years treatment cost for Paricalcitol patients was $10,024.25, while PTX was US$5,369.74(-46%) resulting in an ICER of US$7,619.94 per LYG, which is 28.2% below Mexican Gross Domestic Product (GDP) per capita. Probabilistic analysis shown: 90.1% of patient treated had a cost-effective outcome and 7.2% of cases had a dominant outcome. **CONCLUSIONS:** According to results obtained and using a threshold of US$29,306.29 (3 x GDP per capita), Paricalcitol is a highly cost-effective treatment option compared to PTX when treating patients with SHPT at IMSS.

PDB10

COST-EFFECTIVENESS OF FIXED-DOSE COMBINATION (FDC) OF VILDAGLIPTIN/METFORMIN FOR THE TREATMENT OF DIABETES MELLITUS TYPE 2 IN MEXICO

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OBJECTIVES: Type 2 Diabetes is a major public health care problem in Mexico. Some patients may require more than one oral antidiabetic treatment to achieve glycemic control. Vildagliptin, a DPPIV inhibitor is an option in combination with the standard treatment of metformin. The objective was to assess the cost-effectiveness of Vildagliptin/Metformin FDC versus other oral treatments available in the public market. **METHODS:** Cost-effectiveness analysis of the oral antidiabetic treatments available in the public market in Mexico was conducted. The comparisons included the following options: Vildagliptin/Metformin FDC, glibenclamide, and thiazolidinediones (Rosiglitazone and pioglitazone). Cost effectiveness analysis versus other oral antidiabetics incorporated the incidence and costs of adverse events according to Ferrannini 2009 and Gonzalez-Ortíz 2009 for glibenclamide and Motola 2012 for thiazolidinediones. Drug costs were elicited from public tenders and health care services from unitary costs of the IMSS. The perspective is the public health provider and the time horizon is one year. **RESULTS:** The use of Vildagliptin/Metformin FDC (50/500 or 850 mg) BID compared to glibenclamide, is a dominant strategy if the cost per hypoglycemia exceeds US$714.03. Vildagliptin/Metformin FDC is dominant versus pioglitazone,if the cost of fractures incurred by pioglitazone exceeds US$56.56. Drug acquisition costs of Vildagliptin/Metformin FDC are 150% cheaper per patient treated vs rosiglitazone; additionally rosiglitazone is associated with myocardial infarction events. **CONCLUSIONS:** Vildagliptin/Metformin FDC is an opportunity for resource optimization in the public sector. This cost effectiveness analysis is not considering other potential adherence benefits which are related with having two treatments in one pill.

PDB11

PROBABILISTIC SENSITIVITY ANALYSIS TO ANALYZE THE COST-EFFECTIVENESS OF ORAL HYPOGLYCEMIC AGENTS IN THE INITIAL ORAL DRUG TREATMENT OF OUTPATIENTS DIAGNOSED WITH TYPE 2 DIABETES IN PRIMARY CARE

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OBJECTIVES: To perform a probabilistic sensitivity analysis to analyze previously reported results about the cost-effectiveness of oral hypoglycemic agents (OHA's) in the initial oral drug treatment of patients diagnosed with type 2 diabetes mellitus in public primary attention in Mexico. **METHODS:** A probabilistic sensitivity analysis was made in order to analyze results previously reported in which a deterministic sensitivity analysis was performed to study the cost-effectiveness of three OHA's: metformin, glibenclamide and acarbose. We used TreeAge-Pro® software for programming and simulating a Markov model of two health states (HbA_{1C}≤7% or HbA_{1C}>7%) and twelve cycles of 1 month for a time horizon of 1 year. The parameters of monthly success probability as beta distributions and monthly costs as lognormal distributions of therapeutic alternatives were computed through a parametrization of data. Monte Carlo's simulations were computed for cohorts of 10,000 patients for each treatment option. **RESULTS:** The results of the Monte Carlo's simulations showed very close iterations clouds for metformin and glibenclamide showing evident dominance of both over acarbose. In the acceptability curve generated, for a willingness to pay (WTP) = 0 the probabilities to be cost-effective were 49.46 %, 43.04 % and 7.50 % for glibenclamide, metformine and acarbose, respectively, whereas for a WTP = 1 mexican GDP per capita (US $ 7876.00 in 2009) were 66.26 %, 26.98 % and 6.76%. The glibenclamide versus metformin incremental cost-effectiveness analysis showed similar results as mentioned before, showing 59.72% of iterations below the WTP = 1 mexican GDP per capita line. **CONCLUSIONS:** The probabilistic sensitivity analysis showed which the initial drug therapy with glibenclamide or metformin have advantage over acarbose. There is not sufficient evidence to say glibenclamide has advantage over metformin for WTP near to cero, as in low to middle income countries where containment of expenditures is important.

PDB12

A HEALTH ECONOMIC ANALYSIS OF THE LONG-TERM OUTCOMES AND COSTS ASSOCIATED WITH USING CANAGLIFLOZIN VERSUS SITAGLIPTIN AS AN ADD-ON TO METFORMIN (MET) IN MEXICO

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OBJECTIVES: Canagliflozin (CANA) is a novel inhibitor of the sodium glucose co-transporter 2 in development for treating patients with type 2 diabetes mellitus (T2DM). In a previously reported randomized, double-blind, 4 arm parallel group (placebo, CANA 100mg, CANA 300mg and sitagliptin 100mg [SITA]) study of 1284 subjects inadequately controlled on MET monotherapy, CANA 100mg and 300mg significantly decreased HbA_{1c} versus placebo after 26 weeks of therapy by 0.62% and 0.77%, respectively; SITA decreased HbA_{1c}versus placebo by 0.65%. In this trial, both